Malaria and global warming in perspective?

and other gram-negative pathogens in Europe (8-10) underlines the need for systematic surveillance to monitor the spread of similar resistance determinants.

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Malaria and Global Warming in Perspective?

To the Editor: I read with great interest the article "From Shakespeare to Defoe: malaria in England in the Little Ice Age" (1). Unfortunately, the article is not as balanced as a presentation last year by Paul Reiter, which clearly illustrated that, although climate is important in the transmission of malaria, the influence of other factors (e.g., access to medical care and improved housing) is likely to be of more importance in Europe.

Malaria indeed was quite common in Europe, even in the Roman Empire and in Medieval Europe, and until a few decades ago, it was still present in parts of Europe, Australia, and North America. In fact, the failure of the 1806 British invasion of Zeeland in the Netherlands may be attributable to infection of the British forces with malaria. However, the authors referenced by Reiter have never made the claim that in the coming years warmer "temperatures will result in malaria transmission in Europe and North America." On the contrary, the reports of the Intergovernmental Panel on Climate Change Reiter quotes conclude that "Although climate change could increase the potential transmission of malaria [in Europe and North America], existing public health resources—disease surveillance, surface water management, and treatment of cases—would make reemergent malaria unlikely" (2,3).

Reiter's argument that some scientists attribute the recent observed increase in malaria risk to climate trends is also not accurate. While acknowledging the sensitivity of the malaria mosquito and parasite to climate, these researchers examine insect and incidence data to explore multiple factors underlying malaria emergence. Another group of scientists uses mathematical simulation models to estimate changes in malaria risk over the next few decades. These models, which are heuristic tools not meant to predict future worlds, assess how potential risk for malaria may by affected by changes in climate (4). The goals of both types of research are to improve knowledge of the complex malaria transmission cycle, define epidemic-prone areas, identify the reasons for increased malaria risk, and develop solutions to protect vulnerable communities.

Dr. Reiter acknowledges the sensitivity of malaria to climatic influences, and I am sure that he agrees that change in climate will affect risk for transmission—he may be skeptical as to whether global warming will ever become a fact, but that is another question. While Reiter's paper offers an interesting perspective on the history of malaria in Europe, it provides no illuminating information on the influence of climate change on human health.

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For P. Reiter's response, please see
http://www.cdc.gov/ncidod/EID/vol6no4/reiter.htm

Serologic Evidence of Human Monocytic and Granulocytic Ehrlichiosis in Israel

To the Editor: We read with great attention the article by Dr. Keysary et al., who reported the first evidence of human monocytic and granulocytic ehrlichiosis in Israel (1); however, we disagree with their conclusions.

Ehrlichiae comprise a large group of intracellular organisms pathogenic for animals and occasionally for humans. Because these organisms are closely related, serologic cross-reactions occur within and between groups, leading to mistakes in identification. For example, ***Ehrlichia chaffeensis*** was misdiagnosed as ***E. canis*** in humans (2) and human granulocytic ehrlichiosis as human monocytic ehrlichiosis in areas where the vector was not present (3). Because of such cross-reactions, serology alone is not sufficient to establish the existence of a new ehrlichial disease.

With the exception of ***Rhipicephalus sanguineus***, the brown dog tick, which is distributed worldwide, tick species of medical importance are very geographically specific. For example, the ***Ixodes*** and ***Dermacentor*** spp. found in Europe are not those found in the United States. Consequently, tick-transmitted organisms and diseases are also very specific geographically. For example, ***Borrelia*** spp. found in the Old World are not found in America (except for ***B. burgdorferi stricto sensu,*** which is found in both Europe and America). ***R. rickettsii***, transmitted by ***Dermacentor andersoni*** and ***D. variablilis,*** is reported in the United States but not in Europe, where the vectors are not present.

American monocytic ehrlichiosis is caused by ***E. chaffeensis***, which is transmitted by the tick ***Amblyomma americanum,*** found only in America. The main reservoir is the deer ***Odocoileus virginanus*** (4).

It is very unlikely that a tick-borne disease occurred in a country where neither the vector nor the reservoir of the bacterium exists. All attempts to demonstrate the presence of ***E. chaffeensis*** in the Old World, including Africa, have failed. Indeed, there is no convincing evidence of the existence of ***E. chaffeensis*** outside America.

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